



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,153	03/16/2001	Dieter Graiger	GRAIGER ET AL-1	7924

7590 04/09/2003  
COLLARD & ROE, P.C.  
1077 Northern Boulevard  
Roslyn, NY 11576

EXAMINER

LEYKIN, RITA

ART UNIT	PAPER NUMBER
----------	--------------

2837

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/810,153

Applicant(s)

GRAIGER ET AL.

Examiner

Rita Leykin

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-30,34-47,49 and 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-30,34-47,49 and 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2837

## **DETAILED ACTION**

### ***Response to Amendment***

This office action is in response to the amendment, filed on 3/14/03.

Applicant's arguments have been considered, but found not persuasive. It is the examiner's responsibility to give the broadest interpretation to the language of the submitted claims. The art by Nishikawa et al. US # 5,488,277 cited in previous office action teaches all components and connections that are claimed in a broad language of claim 26. In Fig. 1 Nishikawa et al. show mobile robot machines 2-1, 2-2 ---2-10 and their connection terminals that are in communication link with the control station 1. The control station communicates with robots by radio. This established link represents the interface that is a wireless direction-finder of the corresponding distant points. The operational element of the control and/or robot machine, such as memory of the device is used for actively accepting/acknowledging the potential connection by controller operating element and/or monitoring unit. Examiner believes that above explanation shows very clear how broad the language of claim 26 can be interpreted.

Besides that, some additional problems are noticed during forcer examination of the application.

In claim 26, line 9 "the selected, wireless direction-finder " has no antecedent basis in this claim.

Claims 36-47, 49 and 50 are apparatus claims, wherein claim 36 should not be a dependant claim of the method claim 26.

Based on the above, examiner maintains the previous rejection as follows.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 26-30, 34-47, 49 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa et al. US # 5,488,277.

With respect to above claims, in Fig. 1 and 17 Nishikawa et al. discloses:

- A travel control method in the mobile robot system including plurality of mobile robots and the control station for the controlling these mobile robots. Wherein, the control station directs one of a plurality of robots to the destination robot, responding to the direction, searches the route to the destination directed by the control station and sends the result to the control station. The control station, that receives this information, checks if the travel path searched by the mobile robot is already reserved by other mobile robots, (see abstract);
- The control station 102 is supplied via the communication device 104 by radio;
- The command receiving section 106 for receiving the travel command supplied from command section 103 one after another and supplies the received commands to the command interpret section 107 and the track correction;

Art Unit: 2837

- A series of travel commands prepares the travel pattern of the mobile robot 102 and supplies this travel pattern to command preparation section 108.
- The travel pattern consists of the speed pattern, rotation pattern and halt pattern. The servo command preparation section 108 reads the travel pattern signals and computes the deviation signals by comparing them with the feedback signals and feeds them into the servo control section 109.
- The servo control section 109 drives and controls the motors on the right and left so that above mentioned deviation signals become zero and turns will to the right and left;
- The speed of the motors 110a and 110b are converted into the electric pulses by the encoders on the right and left 112a and 112b connected respectively with the axes of the rotation of the motors 110a and 110b and fed to the track correction section 115;
- The ultrasonic range finding section 113 for measuring the distance from the robots to the walls on the right and left side;
- An ultrasonic transmitter 113a installed on the right and left sides to discharge the ultrasonic waves toward right and left walls receives the reflected waves by ultrasonic receivers 113b on each side respectively and measures the distance to each wall by the elapsed time. The measured result is fed to the environment recognizing section 114;

Art Unit: 2837

- The environment recognizing section 114 transfers that measured result to the track correction section 115, detects the presence of absence of the wall or the changing point (edge) and in addition feeds the result of this detection to the track correction section 115;
- The track correction section 115 counts the pulse signals sent from the right and left encoders 112a and 112b respectively and obtains the travel distance and travel speed and the angle of rotation from the difference of the pulse signals between right and left. The track correction section 115 compares the travel distance, travel speed and the angle of rotation computed from the above pulse signals with output data from the environment recognizing section 114 and prepares the feedback signal of the speed and angle of rotation in order to travel according to the contents of the scene table of the map section 105, (see column 16, lines 1-65).

### ***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2837

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita Leykin whose telephone number is (703)308-5828. The examiner can normally be reached on Monday-Friday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703)308-3370.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Rita Leykin  
Primary Examiner  
Art Unit 2837



R.L.  
April 1, 2003